

Firepower: How Weapons Shaped Warfare. By Paul Lockhart. New York: Basic Books, 2021. xii+624 pp. Illustrations. \$35.00.

Interesting throughout, well-written and thoughtful, Paul Lockhart's impressive work very much argues the case for the salience of firearms, not only as important in their capabilities, but as war-winning tools that drove the pace of military development and had broader significance for political, social and cultural change. While not new, this is a powerful restatement of the thesis, one that takes on added value both from bringing in sea, notably battleships, and air, and from drawing on a broad range of relevant recent work. There is a reiterated stress on the significance of firepower. Thus, of the arms races prior to World War One, Lockhart argues that the participants sought to outdo one another in the aggregate size of their military and naval forces but also in arms design, and goes on to illustrate this with much detail. Indeed, this section is a pivot of the book. For that war itself, Lockhart switches attention to the tank, although, as my own book on tank warfare makes clear, he is going too far when he claims that the tank would change everything about the conduct of war on land. Indeed, Lockhart sees a form of baton-transfer:

'...nearly all the distinguishing elements of firearms technology in 1945 were there in 1939, or even 1919. Much the same could be said of artillery.... The real advances ... instead, from ... the tank and the warplane.' (p. 469).

As I have tried to show in my book on artillery, this underrates much, not least the anti-tank gun.

Lockhart deserves congratulation. His favourably-priced book, which is supported by illustrations, will enjoy an extensive readership, not least when published in paperback. At the same time, precisely because of its strengths, there is a need to draw attention to several problems, not least in the hope that Lockhart will address them in future work. The two major problems are an omission of much or often any treatment of firepower across large sections of the world, notably of Asia. In short, this is a Western account of the subject in the West. Readers will have their own view of this. To Lockhart's great credit, he outlines this element in his Preface, so, hopefully, he can take his exciting approach and style, and apply it more widely in future work. Indeed, a sequel is much to be anticipated.

Secondly, Lockhart should be encouraged to write another sequel on the period after 1945. He sees a decline in significance for firepower then:

'what heralded the passing of the age of the gun: not that firearms had fallen into disuse, but that after 1945 they were no longer front-and-center in military technology. Firearms were, and are, no longer the focal point of weapons engineering... Not unimportant by any stretch, but not nearly so central to organised violence as they once were' (pp. 559-60).

Well yes, but this claim really could do with further investigation. Whatever may be the case in the future, firepower is central to conflict within states, which constitutes the vast majority of wars. Moreover, in one light, missiles are just another version of artillery. Indeed, the platforms change or are supplemented, but not the emphasis on firepower, a point readily apparent from the Ukraine war of 2022-23. This idea could be probed further and Lockhart has clearly much to offer in this respect.

More generally, there is a need to address the overlaps of different forms of weaponry delivery. For example, Lockhart has little to say about cavalry. While understandable in terms of his priorities and reflective of the pressure on his space, this relative lack of attention could be qualified by two factors, one the continued relevance of cavalry, which could be a qualification of infantry deploying firearms and, secondly, the important role of mounted firepower. In this case the techniques employed for mounted archery were rapidly used also for firearms. In part, indeed, this reflected the extent to which far from necessarily revolutionising, or even transforming firearms, they were in fact incorporated into existing structures and practices. To a degree this was also true of the transfer between infantry archery and firearms. Lockhart, of course, is aware of this point. It is really the question of emphasis.

Let us close with a more general question. Do weapons 'shape' warfare? Well, if so, this requires their integration into productive processes, force structures, unit co-operation, training, doctrine and much else. In short, there are many constraints affecting the adoption, integration and use of technology; and much involves organisation and the receptiveness of existing structures. Lockhart's book is a valuable introduction, but there is much for this scholar to address in future work. So, more generally, for the type of military history that addresses one aspect in the long term.

Jeremy Black, University of Exeter